Amendments in the specification:

1) Please replace the paragraph beginning on line 25 of page 1 with the following paragraph:

Currently, heart disease such as heart attack and stroke is the number one killer in the United States. One out of four men and women would experience this disease during his/her lifetime. In this category, the coronary artery disease is the most serious and often requires an emergency operation to save lives. The main cause of the coronary artery disease is the accumulation of plaques inside artery, which eventually occludes blood vessels. Several solutions are available, e.g., balloon angioplasty, rotational atherectomy, and intravascular stents (balloon-expandable wire mesh implants), to open up the clogged section, which is called stenosis. Traditionally, during the operation, surgeons rely on X-ray fluoroscopic images that are basically planar ~~planary~~ images showing the external shape of the silhouette of the lumen of blood vessels. Unfortunately, with X-ray fluoroscopic images, there is a great deal of uncertainty about the exact extent and orientation of the atherosclerotic lesions responsible for the occlusion to find the exact location of the stenosis. In addition, though it is known that restenosis can occur at the same place, it is difficult to check the condition inside the vessels after surgery.

2) Please replace the paragraph beginning on line 12 of page 4 with the following paragraph:

FIG. 4 is a line drawing ~~photograph~~ showing an exemplary compliant structure of FIG. 2A having no mechanical joints and made of a nitinol tube with a built-in compliant mechanism.

3) Please replace the paragraph beginning on line 15 of page 4 with the following paragraph:

FIGS. 5A-5B are line drawings ~~photographs~~ showing a micromanipulator having the compliant structure of FIG. 4 and two SMA actuators configured to actuate the compliant mechanism thereof.

4) Please replace the paragraph beginning on line 26 of page 4 with the following paragraph:

FIG. 9 is a line drawing ~~photograph~~ showing another exemplary compliant structure under loading in a bulging-out configuration.

5) Please replace the paragraph beginning on line 19 of page 6 with the following paragraph:

As illustrated in FIG. **2B**, compliant mechanisms can be in a "double helix" configuration. It is desirable with the present invention that any bending strain of the compliant mechanisms is distributed substantially evenly along their entire lengths. This reduces peak strain, which in various embodiments, can be, 4% or less, 3% or less, 2% or less and 1% or less. The "double helix" configuration provides greater symmetry in motion and provides a more even bending. It is desired that the stiffness

of compliant mechanisms in different directions be substantially the same.

6) Please replace the paragraph beginning on line 21 of page 8 with the following paragraph:

The amount of continuous power applied to all of the actuators is 1W or less, with a peak power of 10W or less. It will be appreciated that the micromanipulator of the present invention can have at least two actuators. Additional actuators can be utilized, subject to the ability to manufacture, cost, size, and like.

7) Please replace the paragraph beginning on line 15 of page 10 with the following paragraph:

In addition to being particularly useful in ultrasound intravascular interventional devices, systems, and applications, the present invention can also be useful in catheter steering related applications including but not limited to any vessels in the body, such as those in neurology, biliary vessels ~~vessles~~, the fallopian tubes, coronary vessels (including peripheral vessels), and the like. It will be appreciated that the present invention can also be utilized for industrial applications as mentioned above. In a conventional catheter steering system, it is difficult to steer a small catheter inside human blood vessels, especially in a small artery. However, by implementing a compliant structure with multiple segments of compliant mechanisms in various configurations and individually controlling each segment, it is possible to generate intricate

motions and steer the catheter in any direction, even in a tiny area. For example, a catheter steering system implementing a micromanipulator 600 according to the present invention may include multiple segments of compliant mechanisms 601 actuated with SMAs 620, as shown in FIG. 6. These tubular compliant mechanisms are arranged in various configurations for intricate motions of the micromanipulator. Such catheter steering system is particularly useful for intravascular applications including imaging and therapy.